

What is claimed is:

1. A collection of genomic DNA clones that have been individually isolated and arrayed unto a solid support matrix wherein each of said clones is present in a vector comprising a marker sequence encoding an activity negatively selectable in mammalian embryonic stem cells.

2. A collection of genomic DNA clones according to Claim 1 wherein the genomic component of said clones has been sequenced for at least about 75 bases in from one or both ends of the genomic sequence present in the vector, and wherein said vector encodes a marker sequence encoding an activity negatively selectable in mammalian embryonic stem cells.

3. A collection according to Claim 2 comprising at least about 500 clones.

4. A collection of genomic DNA clones that have been individually isolated and arrayed unto a solid support matrix wherein each of said clones is represented in at least three distinct pools of clones that can be screened to precisely locate a clone of interest present in the collection.

5. A process of generating a gene targeted animal or cell using a clone obtained from a collection according to any one of Claims 1, 2, 3, or 4.

6. A process according to Claim 5 wherein said clone is modified by homologous recombination in yeast or bacteria.

7. A process according to Claim 5 wherein said clone is modified by transposition.